



Low Noise Level Measurement

Measure less than 6.5 dBA with a handheld, portable system using the Model 831

Highlights

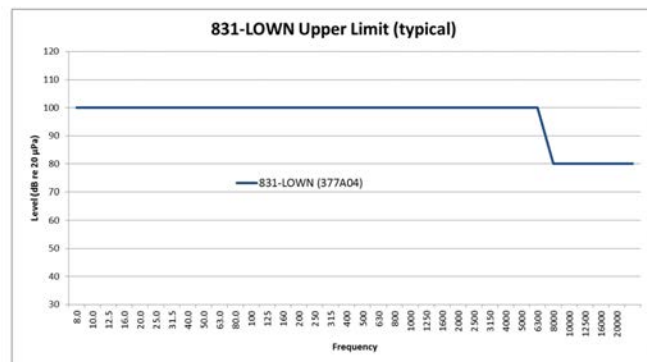
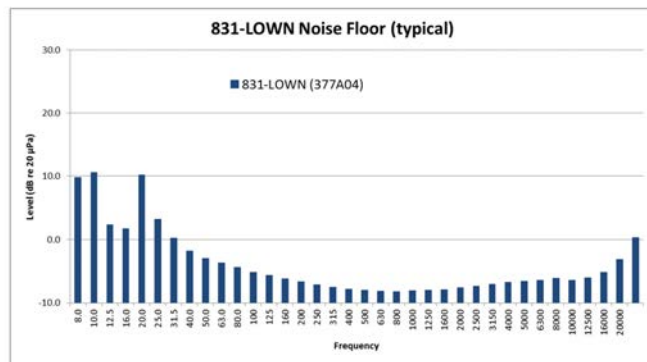
- No external power supply required
- 10 Hz to 16 kHz frequency range
- Highly portable
- Low power (4 mA ICP®)
- Single channel

Applications

- Product testing
- Environmental noise
- R&D



Easily make measurements to 6 dB A-weighted using the Model 831 sound level meter paired with the 378A04 low noise microphone and preamplifier. Due to the innovative design of the 378A04 which uses a prepolarized microphone and ICP (constant current) interface, the combination produces a highly portable system that is battery powered and intuitive to use.





Low Noise Measurement with Model 831 (831-LOWN)

378A04 Specifications

Acoustic		
Sensitivity	450 mV/Pa -8 (±2 dB) re 1 V/Pa	
Frequency Range	10 to 16,000 Hz	
Inherent Noise	< 6.5 (5.5 typical) dB re 20 µPa	
Overload	Level (dB re 20 µPa)	Frequency
	100 dB	< 5 kHz
	80 dB	> 5 kHz
Environmental		
Operating Temperature	14 °F to 176 °F (- 10 °C to 80 °C)	
Operating Humidity	0 to 99% relative humidity, non-condensing	
Electrical		
Polarization	0 V	
Output Voltage	± 2 V peak maximum	
ICP constant current	4 to 20 mA (4 mA supplied by Model 831)	
Physical		
Diameter with Grid	0.52 in (13.2 mm)	
Height with Grid	4.03 in (102.2 mm)	
Equalization Vent	Rear	
Weight	1.8 oz (51.3 grams)	
Maximum Sound Pressure	130 dB re 20 µPa peak	
Mechanical	Grid cap and microphone not removable	

831-LOWN Specifications

Calibration	Requires 94 dB re 20 µPa calibrator such as CAL200	
Self-generated Noise (typical)		
Weighting	0 dB Gain	20 dB Gain
	A	6 dB
	C	11 dB
	Z	22 dB
Alkaline Battery Life	Decreased approx 15% when using 378A04	

831-LOWN Included Items

831	Model 831 Sound Level Meter
831-4mA	Option to modify Model 831 for 4 mA ICP current
831-ACC	Accessory kit for Model 831
ADP074	Model 831 adapter for ICP input
378A04	Low noise ICP microphone and preamplifier
012A10	BNC cable, 10 ft (3 m)
BNC M-M	BNC male to male connector
ADP032	Adapter to mount ½ inch preamplifier to tripod (1/4-20 thread)

Ordering Information

831-LOWN	Low noise system including Model 831, 378A04 low noise microphone & preamplifier and accessories
831-LOWN-UPG	Upgrade Model 831 to measure low noise using 378A04 low noise microphone & preamplifier

831-LOWN-UPG Included Items

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Optional 831 Accessories

CAL200	Class 1 acoustic calibrator, 94 or 114 dB at 1 kHz (The 378A04 must be calibrated at 94dB)
PRM831-FF	PRM831 preamplifier with free field microphone (377B02)
PRM831-RI	PRM831 preamplifier with random microphone (377B20)
TRP001	Tripod with ADP032 for mounting ½ inch preamplifier

Software

SWW-DNA	Software and USB dongle for evaluation and reporting
SWW-DNA-831	Instrument driver for SWW-DNA to provide control, live display, and data translation from Model 831

Compliance

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